

Shanghai, China

CITIC Pacific Plaza

Hardest modernization project to date?

The CITIC Pacific Plaza in the Jing'An District opened for business in 2002. Located smack in the heart of Shanghai – on Nanjing Road West, Shanghai's main shopping street – the multi-complex building, with its shopping mall topped by a 193-meter-high office tower, quickly became a city landmark.

Challenges and client brief

- Narrow elevator shafts
- Outdated third-party elevators
- A requirement: minimum disruption

Schindler solutions

- Modular PMR 490 machines
- A high level of customization
- Car Call Interface (CCI)
- Destination control Schindler PORT for improved traffic performance

Investor
China International Trust and Investment (Hong Kong Group) Co., Ltd.; Swire Properties Limited; Shanghai Jing'an City Commercial Corporation

Developer
Shanghai CITIC Pacific Plaza Co., Ltd.

Architect
P&T Group



Project overview

2019

MOD start year (still ongoing)
Construction end year: 2000

6

Low-zone elevators

6

Mid-zone elevators

6

High-zone elevators

3

Service elevators

186 m

Max travel height

6.0 m/s

Max speed

Conventional to Schindler PORT
Elevator control

By 2018, however, the office building's transit system was operating at full capacity – and was struggling to cope. Office tower workers had to routinely wait in long lines to get into an elevator. During peak-hours, waiting lines would extend outside the building's lobby. Something had to be done – it was time to reinvigorate the plaza.

But not at any cost. Any work undertaken would have to create minimum disruption to the building's day-to-day operations – a client requirement. After all, hundreds of office workers relied on the building's elevators to get to their office floor.

The dismantled parts of a PMR490 machine

PMR 490 machine

Project challenges

Narrow elevator shafts. The CITIC Pacific Plaza's office tower had very narrow elevator shafts. Replacing the building's existing elevator cars with larger ones – the obvious go-to solution to increase handling capacity – was never an option.

Previous elevator supplier out of market. The only option was to install new, more powerful elevator machines and fitting the building's existing elevators with an intelligent transit management system – Schindler PORT – to increase their traffic performance.

Easier said than done. The manufacturer of the building's elevators, GEC, had gone out of business. That meant spare parts could no longer be found on the market. Schindler took it in stride. Over 70% of the components required for the modernization of the tower building's elevators had to be manufactured to measure by Schindler – no small task.



Schindler solutions

Dismantlable PMR 490 machines. For this project, Schindler used PMR 490 modular gearless machines, which could be dismantled in small parts for transportation and reassembled on-site by certified Schindler technicians. They were hauled easily through the building's existing pathways, causing minimum disruption, and installed in the building's machine room, where space was tight.

First application of CCI technology in mainland China. In order to facilitate communication between Schindler PORT and the tower building's existing elevators, several Car Call Interface (CCI) control cabinets were shipped from Schindler headquarters in Ebikon, Switzerland, and installed in the office building's machine room. These control cabinets allowed the building's existing elevators to work with our transit management system Schindler PORT.

Traffic improvement with Schindler PORT

Schindler PORT for a hassle-free upgrade.

In such projects, tenants are often concerned about the disruption caused to the building's day-to-day operations. Our Schindler PORT Overlay solution made that transition seamless.

Schindler PORT Overlay integrates both old and modernized elevators under one single umbrella, while modernization is carried out. In this specific case, elevators were upgraded one at a time, while the other elevators continued to convey passengers, leveraging Schindler PORT's efficiency gains. Thanks to Schindler PORT, the traffic performance of the entire elevator group was, at all times, better than before it had undergone modernization – and traffic performance improved steadily throughout the modernization phase.

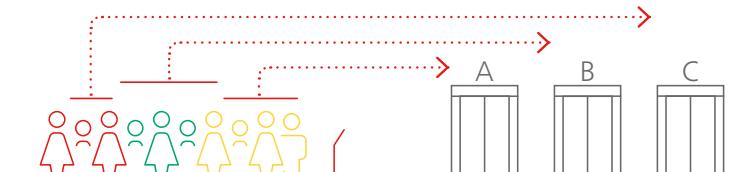


Landing hall of the plaza, equipped with Schindler PORT for a more efficient traffic management

After installing Schindler PORT, there will be a significant improvement during up-peak traffic



Conventional (people in the same color are going to the same floor)



Schindler PORT

+25%
Transportation capacity

-50%
Waiting times

Average waiting times during up-peak time before and after modernization with Schindler, based on Schindler's traffic simulation for CITIC Plaza

Outcome

A comparison of the handling capacity before and after modernization shows that Schindler PORT allowed to:

- reduce waiting times by over 50%
- improve traffic efficiency by approximately 25%
- reduce the average number of stops per trip from 3.5 to almost 1.8

The office building of the CITIC Pacific Plaza completed its modernization at the end of 2020 – as scheduled. The building's tenants have since enjoyed shorter waiting times, as well as smarter journeys. Now fitted with an upgraded drive system and the innovative Schindler PORT technology, the building has caught up with the dazzling pace of urban life and is now heading full speed into the future.